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1993
University of Mass

NOTICE OF PROJECT CHANGE

CENTRAL ARTERY/TUNNEL PROJECT
FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

BOSTON, MA
EOEA #4325

PROJECT PROPONENT: MASSACHUSE5TTS HIGHWAY DEPARTMENT

DATE OF SECRETARY'S CERTIFICATE: JANUARY 2, 1991

This Notice of Project Change (NPC) describes changes in the wetlands mitigation related to the Proposed Action described in the Final Supplemental Environmental Impact Statement/Report (FSEIS/R). The wetlands mitigation as described in the FSEIS/R, Chapter 14 and Part IIB.4.6.3(c) for the Proposed Action focused principally on mitigation opportunities on the Project sites and did not fully address the mitigation at a level of detail necessary for permitting of the Project by the various water resources agencies. During the last two years the Project has been developing a Projectwide Wetlands and Waterways Mitigation Plan in conjunction with the permitting agencies. This NPC describes two specific wetlands mitigation sites 1) the fish reef in Boston Harbor, and 2) restoration of mud flats off of Condor Street in East Boston. A description of the Projectwide Wetlands and Waterways Mitigation Plan is as follows:

PROJECTWIDE WETLANDS AND WATERWAYS MITIGATION PLAN

The Projectwide Wetlands and Waterways Mitigation Plan is a conceptual plan for mitigation actions being proposed by the Massachusetts Highway Department (MHD) to compensate for permanent impacts to water resources, wetlands and waterways (tidelands) due to construction of the Central Artery (I-93)/Third Harbor Tunnel (I-90) Project. Part of the process for selecting the Proposed Action was to identify those alternatives which avoid and/or minimize impacts to the greatest or most practicable degree possible.

The mitigation plans are the result of long-term and ongoing coordination and planning with federal, state and local agencies personnel through the Project's Water Resources Subcommittee (WRS). The Subcommittee was convened by the MHD so that agency concerns and regulatory responsibilities could be coordinated and considered early in the mititgation planning process. The WRS consists of members of the Project and representatives of all agencies (federal, state and local) who have comment and review, concurrence and sign-off, or permitting authority for all proposed activities which will affect either coastal or inland waters and their associated aquatic, wetland or water resources. (See attached list of WRS agencies.)

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Crucial to the mitigation plans was the quantification and characterization of Project impacts to wetlands and waterways resources. This analysis relied on information developed and presented in the Project's FSEIR of November 1990, and included further refinement of that information where available.

An impact analysis was performed to determine the need for mitigation measures in which the Project compared all wetland ecological resource impacts at each Project area (e.g., Spectacle Island, Fort Point Channel, Boston Harbor, etc.,) with all practicable on-site mitigation measures. This analysis indicated that the proposed on-site mitigation while significant, was not fully adequate to mitigate all Project impacts. Therefore, some off-site mitigation was required to compensate for the permanent loss of aquatic habitat.

To identify off-site locations feasible for potential mitigation, the Project conducted a site selection process which solicited sites from federal and state agencies. Approximately 35 sites were reviewed based on agreed upon criteria. Four sites were selected through this process and were generally acceptable to the WRS. A Notice of Project Change (NPC) and two Environmental Notification Forms are being concurrently filed for these sites. The restorations at Rumney Marsh in Revere and Belle Isle Inlet are being filed as two seperate Environmental Notification Forms since they involve work in or near an Area of Critical Environmental Concern. The other two sites include a Fish Reef in Boston Harbor and restoration of mud flats adjacent to Condor Street in East Boston as described in the following NPC.

FISH REEF

The provision of a fish reef was suggested by National Marine Fisheries and Massachusetts Division of Marine Fisheries due to concern that the closure and capping of Spectacle Island would result in the permanent loss of some fisheries habitat. It was suggested that the inclusion of a fish reef would also provide some compatible recreational benefit with the future end use of Spectacle Island as a park.

The exact location of the reef has yet to be determined, and is subject to agency concurrence. The general areas are shown on Figures 1 and 2. By letter dated November 18, 1992, National Marine Fisheries Service and Massachusetts Department of Marine Fisheries have suggested parameters appropriate for design and location of the reef. Further analysis of these general areas are necessary to design and locate the reef properly.

The fish reef will be comprised of one main linear reef with ancillary mound reefs attached to the main reef. The main linear reef (30' x 600') will be oriented perpendicular to the tidal currents to provide maximum shelter opportunities to the fish population. The maximum height will be no more than 6 feet above the bottom substrate in order to minimize impedance of current

flow. Additionally, three to five mounds up to 40 feet in diameter will be constructed on each side of the main linear reef (total of ten mounds). The ancillary reefs are proposed to increase the area of hard substrate thereby increasing the opportunities for algal and invertebrate colonization. Plan views and typical cross sections of the main linear reef are presented in Figures 3 through 5.

The reefs will be constructed with natural rock or prefabricated reef material with openings of 0.5 to 2.0 feet in diameter. These openings (crevices) will be supplemented with culverts to maximize shelter habitat. The culverts will be dead ended to the middle of the reef to prevent channeling of currents.

The artificial reef is expected to attract a combination of demersal (bottom-feeding fish such as flounder) and pelagic (free-swimming fish such as herring) finfish. The reefs provide a substrate for the growth of benthic invertebrates and refuge for small bait fish which in turn attracts larger sport fish. Demersal sport fish that may be attracted to the reef include American eel, Atlantic tomcod, winter flounder, smooth flounder, Atlantic cod, pollock, hake and tautog. Pelagic sport fish that may be attracted to the reef include striped bass, bluefish, and Atlantic mackerel. The reef is expected to also provide habitat for American lobster.

CONDOR STREET

The Condor Street site is located on the corner of Condor Street and Glendon Street in East Boston. The site is 4.5 acres in size and is bounded to the north by Chelsea Creek and to the south by Condor Street as shown in Figure 6. The site is comprised of disturbed upland open field and washed out or collapsed bulkheads. The City of Boston Department of Environment plans to use of this site as a passive recreational area for the East Boston community.

The mitigation plan will include the removal of rotting timbers, fuel tanks and two dilapidated barges offshore of the bulkhead to the east of the site. This activity will enhance 5,000 square feet of mudflat. An additional 7,000 square feet of fill and construction debris in the same vicinity will be removed. Any boulders unearthed during this activity will be used to reinforce the existing bulkhead. Typical cross sections at Condor Street are presented in Figure 6.

The plan will also include the excavation and removal of subsurface debris (i.e., timbers, barges and rubble) on the west side of the site. The area will then be regraded and revegetated to enhance 0.75 acres of bank and intertidal fringe. The revegetation will include transition species (wetland to upland).

WATER RESOURCES SUBCOMMITTEE

Massachusetts Coastal Zone Management

Massachusetts Division of Marine Fisheries

Boston Conservation Commission

Federal Highway Administration

Massachusetts Department of Environmental Protection

National Marine Fisheries Service

Environmental Protection Agency

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

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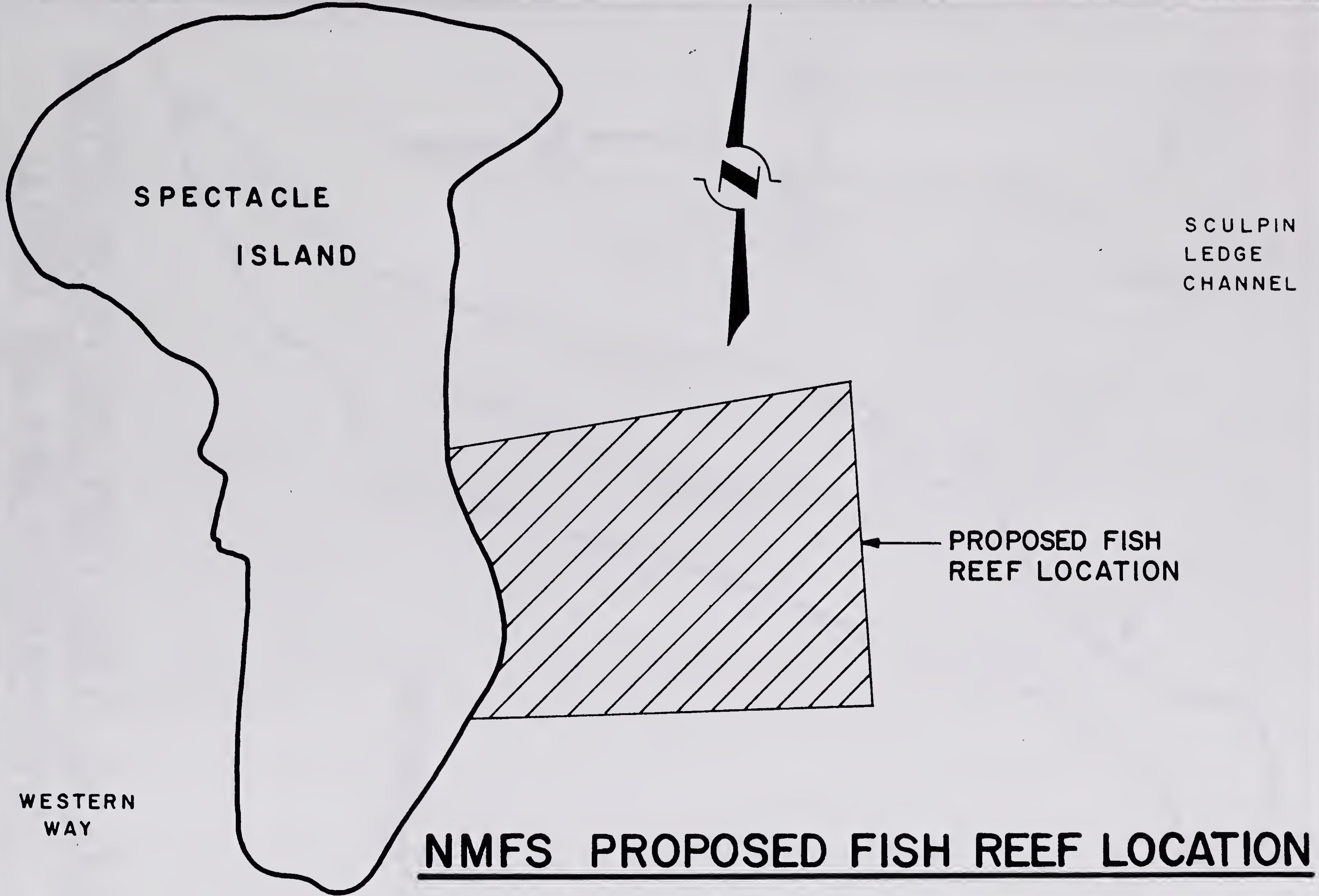
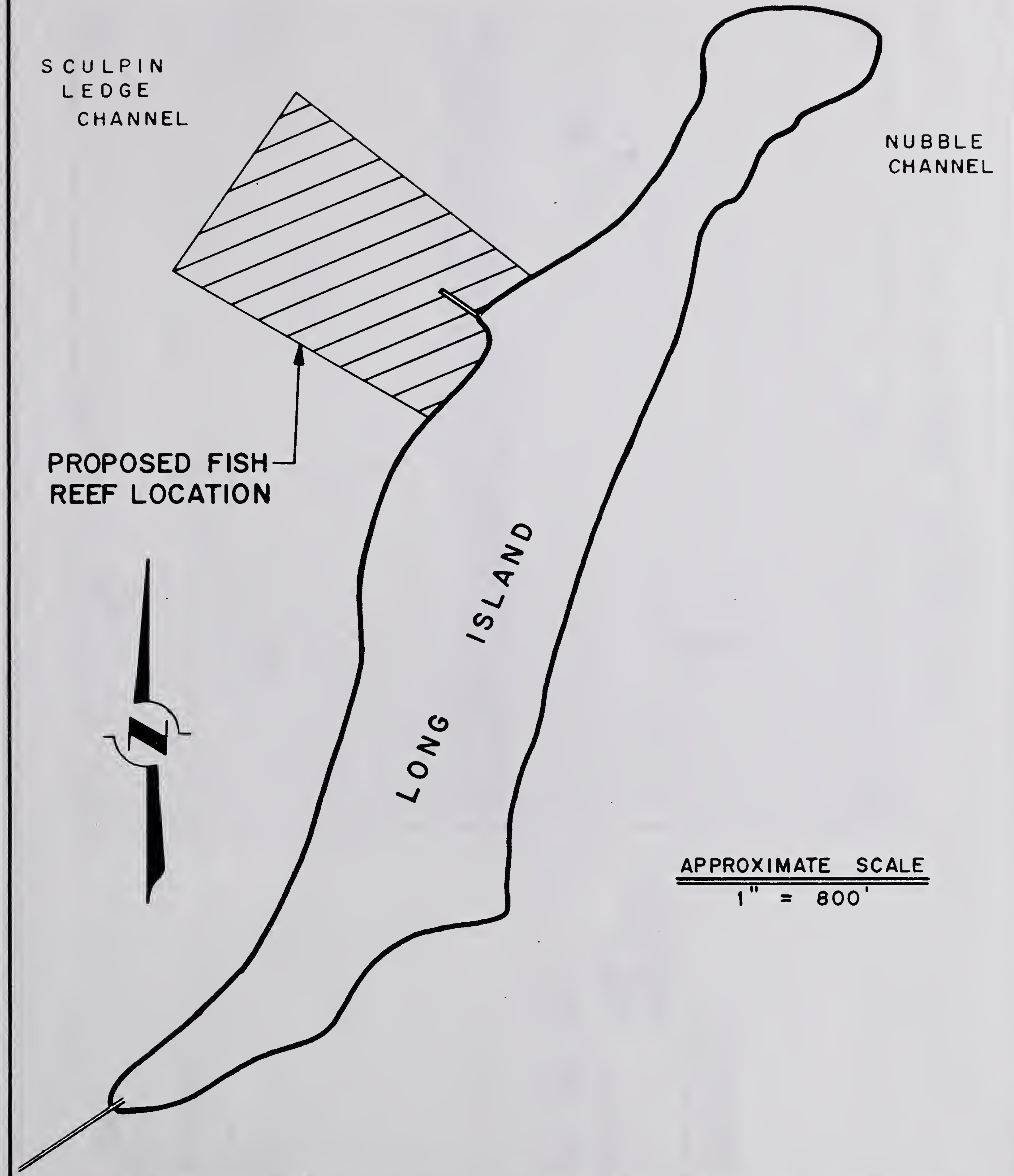


NMFS PROPOSED FISH REEF LOCATION

SPECTACLE ISLAND ALTERNATIVE

APPROXIMATE SCALE: 1" = 500'

FIGURE 1



NMFS PROPOSED FISH REEF LOCATION
LONG ISLAND ALTERNATIVE

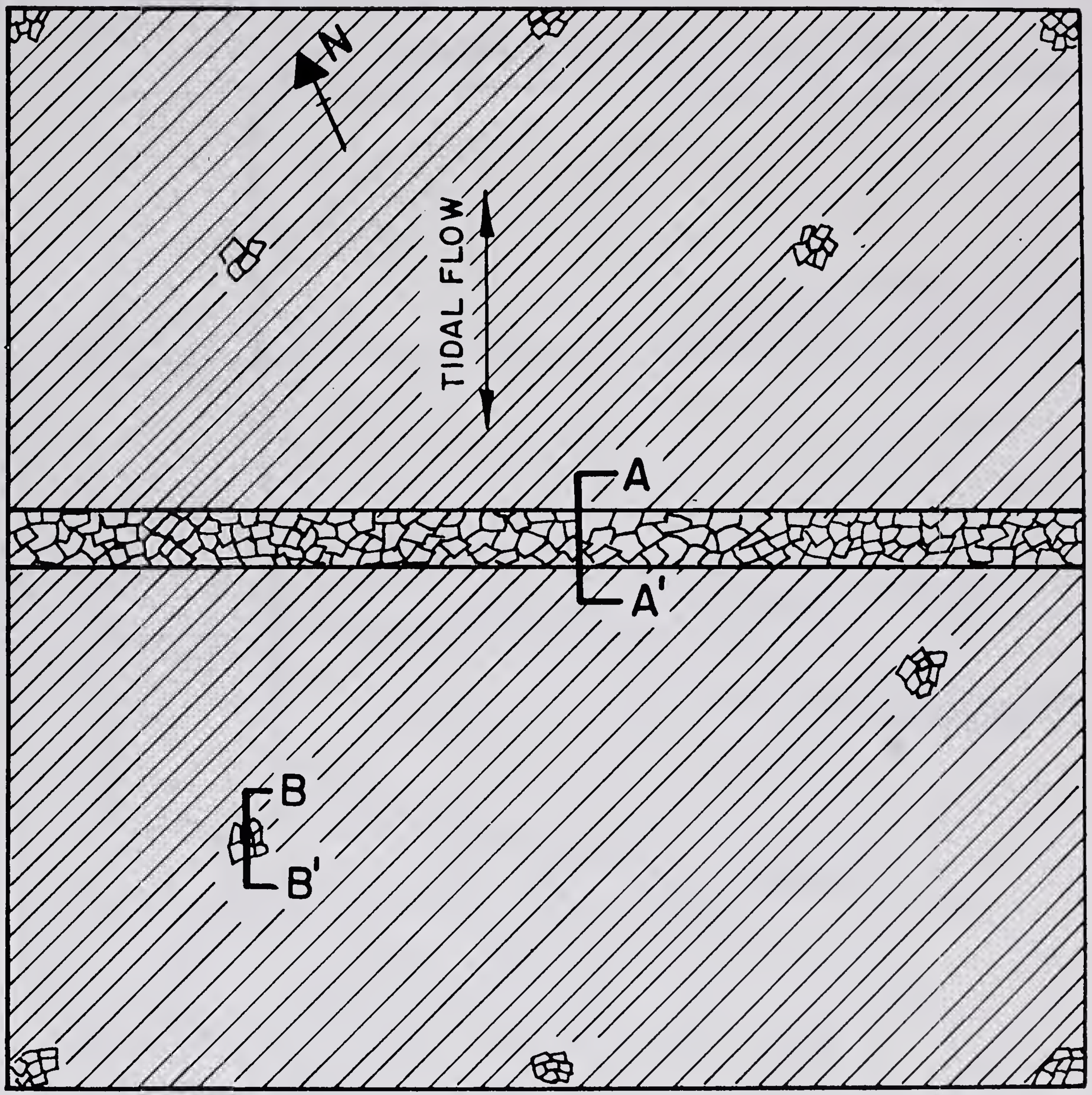
FIGURE 2

PLAN VIEW ARTIFICIAL FISH REEF

PROPOSED CONDITIONS

✿	REEF
////	COBBLE OVER SOFT SUBSTRATE

NOT TO SCALE



NOTE : EXISTING WATER DEPTH = 3M AT MEAN LOW WATER
HARBOR BOTTOM

FIGURE 3

TYPICAL CROSS-SECTION ARTIFICIAL FISH REEF
SECTION A-A' (LINEAR REEF)

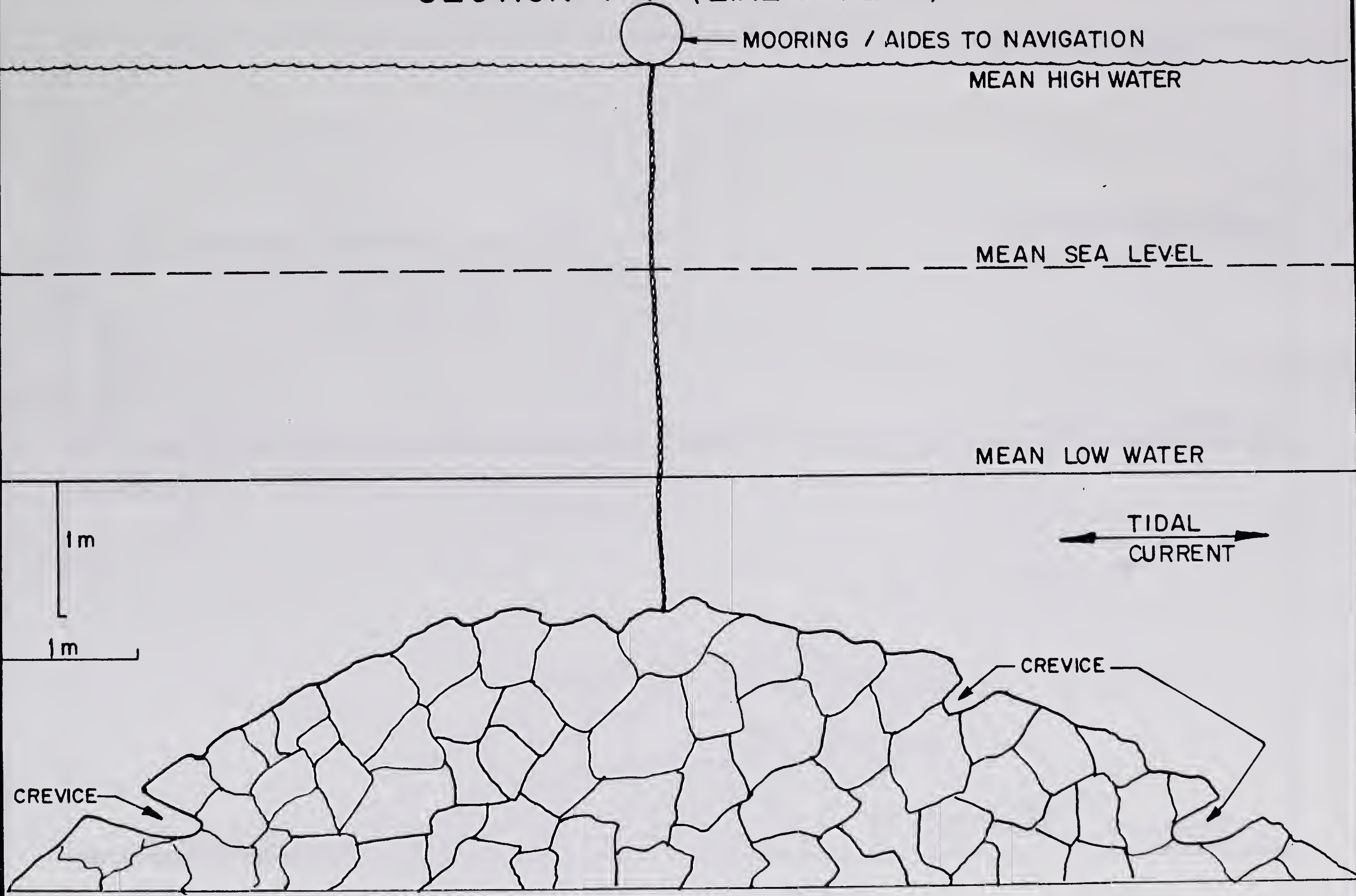


FIGURE 4

TYPICAL CROSS-SECTION ARTIFICIAL FISH REEF
SECTION B-B' (ANCILLARY REEF)

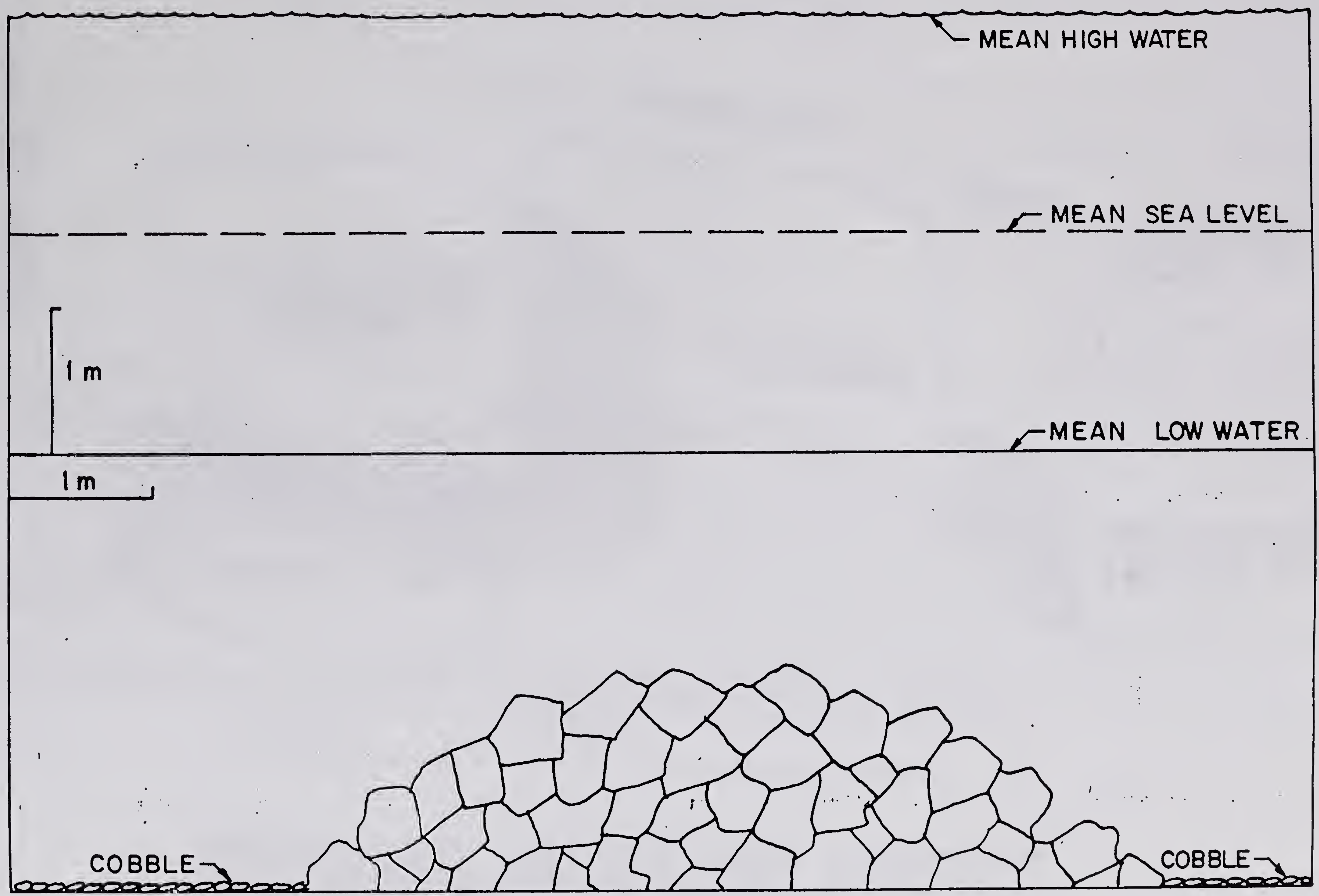
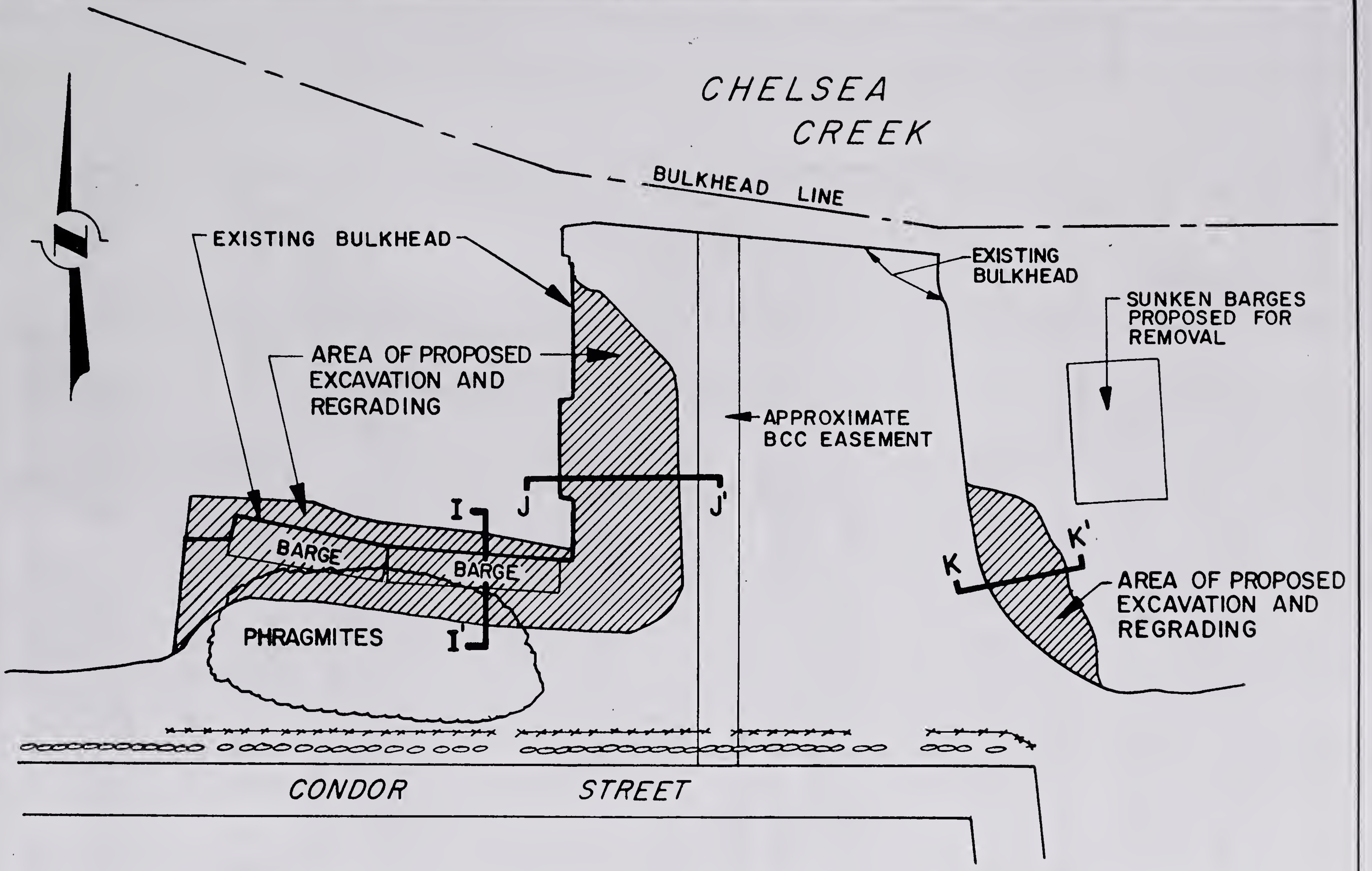


FIGURE 5



PROPOSED MITIGATION CONCEPT AT CONDOR STREET

FIGURE 6

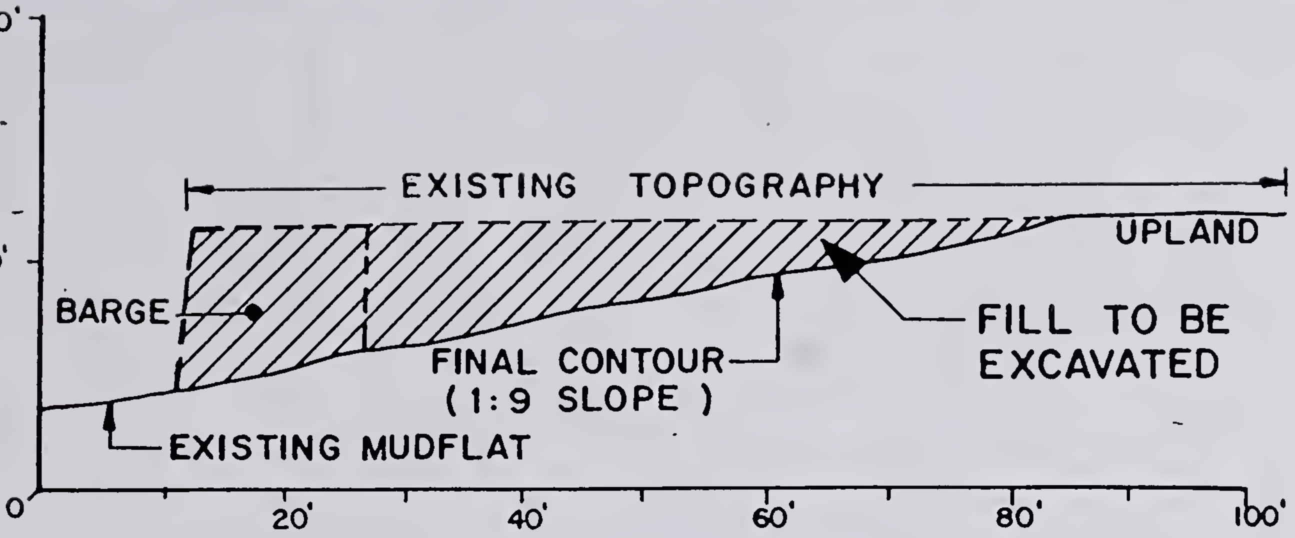
APPROXIMATE SCALE: 1" = 100'

NOTES

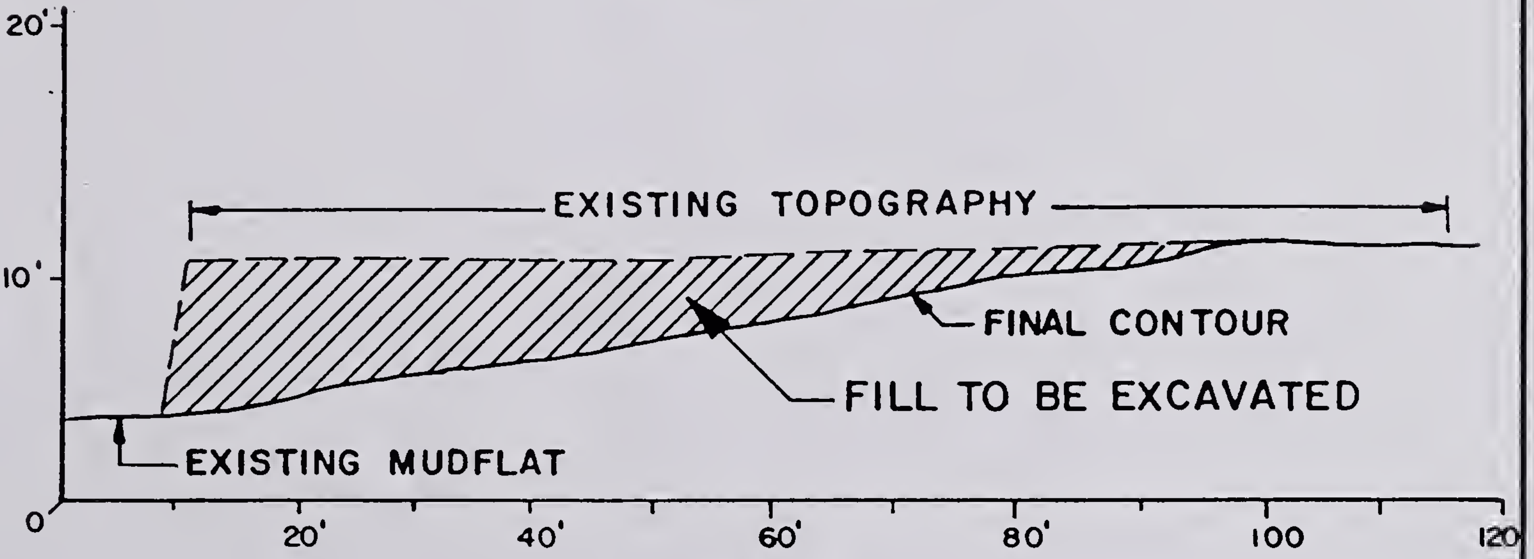
MLW - 0

MHW - 9.5

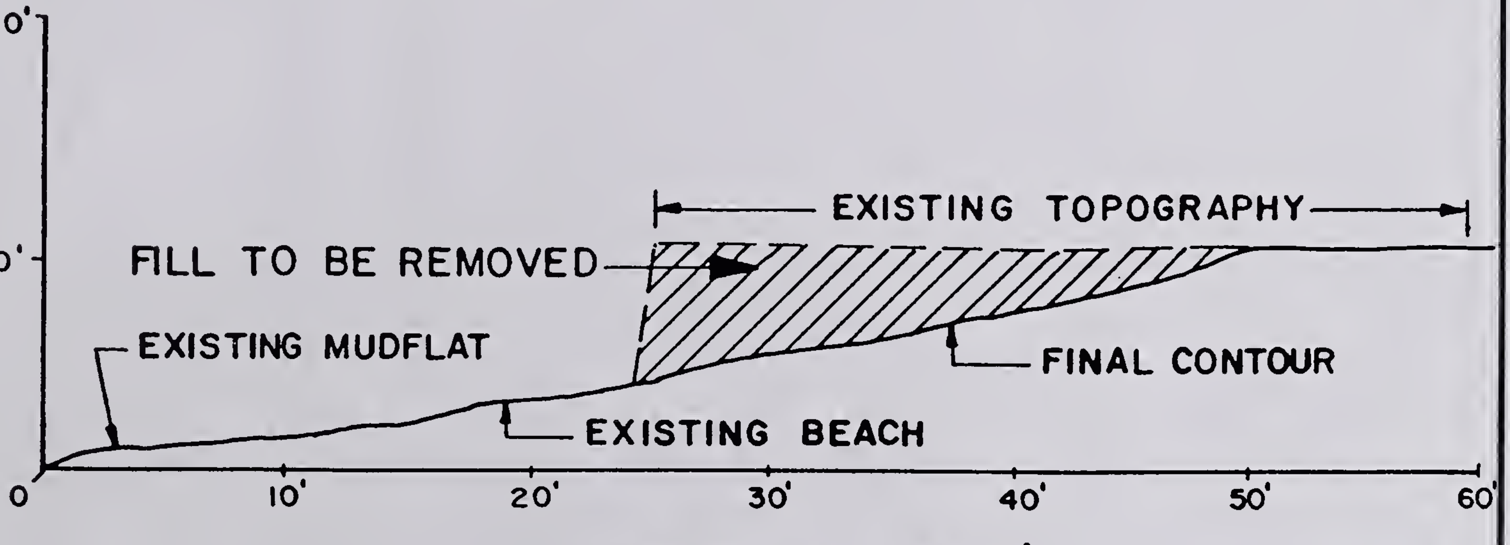
MSL - 4.75



SECTION I-I'



SECTION J-J'



SECTION K-K'

TYPICAL CROSS SECTIONS AT CONDOR STREET

FIGURE 7